

## REMARKS

By this amendment, the claims 1, 2, and 8-13 have been amended. New claims 15-20 have been added to provide for more complete claim coverage. Claims 1-20 remain in the application. Support for the amendments to the claims can be found the specification and drawings. No new matter has been added. This application has been carefully considered in connection with the Examiner's Action. Reconsideration, and allowance of the application, as amended, is respectfully requested.

### Allowable Subject Matter

Claims 9 and 10 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Allowability of claims 9 and 10 is noted with appreciation.

By this amendment, each of claims 9 and 10 have been rewritten in independent form including all of the limitations of the base claim 1 and intervening claim 3. Accordingly, claims 9 and 10 are in *prima facie* condition for allowance. Withdrawal of the objection is respectfully requested.

### Rejection under 35 U.S.C. §101

Claim 13 stands rejected under 35 U.S.C. §101 because the claim contains non-statutory subject matter. This rejection is respectfully traversed for at least the following reason. By this amendment, claim 13 has been amended to recite in part "A computer program comprising a set of instructions embodied or encoded on a computer-readable medium for implementing ... ." Accordingly, claim 13 is now directed to statutory subject matter. Withdrawal of the rejection is respectfully requested.

### **Rejection under 35 U.S.C. §102**

Claim 1 recites a viewing system, comprising acquisition means for acquiring a sequence of images, detection means for detecting an object of interest in said sequence of images,

said detection means comprising:

- localizer detection sub-means for detecting a location of localizers related to said object of interest, wherein the localizers comprise simply shaped objects of radio-opaque material,
- border detection sub-means for indirectly detecting a location of borders related to said object of interest, using said location of the localizers, and viewing means for displaying said sequence of images.

Support for the amendments to claim 1 (as well as for claims 11 and 12) can be found in the specification at least on page 3, lines 7-14.

Claims 1-8 and 11-14 were rejected under 35 U.S.C. § 102(b) as being anticipated by **Dijkstra et al** ("Automated Border Detection in Intra-Vascular Ultrasound Images for Quantitative Measurement of Vessel, Lumen and Stent Parameters" by IEEE Computers in Cardiology 2001:28:25-28, published 23 September 2001, ISBN:0-7803-7266-2).

The PTO provides in MPEP § 2131 that

*"[t]o anticipate a claim, the reference must teach every element of the claim...."*

Therefore, with respect to claim 1, to sustain this rejection the **Dijkstra et al** reference must contain all of the above claimed elements of the respective claims. However, in view of amendments presented herein to claim 1, contrary to the

examiner's position that all elements are disclosed in the **Dijkstra et al** reference, the latter reference does not disclose a detection means "wherein the localizers comprise *simply shaped objects of radio-opaque material*" or "border detection sub-means for indirectly detecting a location of borders related to said object of interest, using said location of the localizers" as is recited in claim 1 (emphasis added). Therefore, the rejection is not supported by the **Dijkstra et al** reference and should be withdrawn.

In contrast, **Dijkstra et al** discloses a method of automatic border detection for quantitative measurements that includes "automated segmentation of lumen, vessel and stent boundaries" (See Dijkstra et al. at section **1. Introduction**, second paragraph, lines 5-7). In addition, **Dijkstra et al** discloses "stent contour detection ... performed in ... transversal slices in the defined segment ..." beginning with "global estimation of the location of struts" which are represented by values "based on a combination of [(i)] the intensity of the corresponding pixel and [(ii)] the distance towards the catheter. [Emphasis added.] (See Dijkstra et al. at section **2.1. Transversal stent detection**, first paragraph, lines 1-9). Furthermore, **Dijkstra et al** discloses that "stent detection is performed only in the transversal images" and not in the longitudinal cross-sections "because the appearance of the stent struts is much less regular in the longitudinal cross-sections, and in some cross-sections no struts are visible at all." [Emphasis added.] (See Dijkstra et al. at section **2.1. Transversal stent detection**, second paragraph, lines 1-3). Thus, **Dijkstra et al** does not disclose localizers that "comprise *simply shaped objects of radio-opaque material*" or border detection sub-means "for indirectly detecting a location of borders related to said object of interest, using said location of the *localizers*" as is recited in claim 1.

Accordingly, claim 1 is allowable and an early formal notice thereof is requested. Dependent claims 2-8 and 14 depend from and further limit independent claim 1 and therefore are allowable as well.

Independent claims 11 and 12 have been amended herein to include limitations similar to those of claim 1. Accordingly, claims 11 and 12 are believed allowable for at least the same reasons as presented herein above with respect to overcoming the rejection of claim 1, and an early formal notice thereof is requested. Dependent claim 13 depends from and further limits independent claim 11 and therefore is allowable as well.

### **New Claims**

New claims 15-20 have been added to provide for more complete claim coverage of the embodiments of the present application. Claims 15-20 depend from and further limits rewritten allowable independent claim 9 and therefore are allowable as well.

### **Conclusion**

Except as indicated herein, the claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or a continuation application.

It is clear from all of the foregoing that independent claims 1, 9, 10, 11 and 12 are in condition for allowance. Dependent claims 2-8 and 14 depend from and further limit independent claim 1 and therefore are allowable as well. Dependent claim 13 depends from and further limits independent claim 11 and therefore is allowable as well. New claims 15-20, which depend from independent claim 9, are believed in condition for allowance, also.

The amendments herein are fully supported by the original specification and drawings; therefore, no new matter is introduced. An early formal notice of allowance of claims 1-20 is requested.

Respectfully submitted,

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